DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-027121
Date Inspected: 01-Feb-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Jobsite

CWI Name:	As noted below			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS OBG

Summary of Items Observed:

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

13E/PP122.5/E3 Lifting Lug Holes W1-W4 (Exterior)

This QA Inspector randomly observed QC Inspector Mr. Jesse Cayabyab perform an ultrasonic inspection of lifting lug holes W1-W4 at 13E/PP122.5/E3. This QA Inspector observed that Mr. Cayabyab detected two (2) recordable but non-rejectable ultrasonic indications. The locations for the indications were as follows; y+280 10mm's in length, 16mm's deep at +13db's, y+495 10mm's in length, 18mm's deep at +13db's. The "A" deck plate section at this location is 20 mm thick. These joints are Seismic Performance Critical members (SPCM).

This QA Inspector performed a Magnetic Particle (MT) Inspection at the locations listed below. This QA Inspector performed the yoke method in conformance with ASTM E 709 and the standard of acceptance with D1.5 section 6.26. This QA Inspector noted that no rejectable indications were found at the time of testing. This QA Inspector generated a TL-6028 MT report on this date. The completed work at this location appeared to be in general conformance with the contract specifications.

13E/PP122.5/E3 Lifting Lug Holes W1-W4 (SPCM)

This QA Inspector performed Ultrasonic Testing (UT) on approximately 10% of the welds located at the

locations listed below. These welds were previously accepted by QC Ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. This QA observed no rejectable indications at the time of testing. This QA generated a TL-6027 UT report on this date. The completed work observed at this location appeared to be in compliance with the contract specifications.

13E/PP122.5/E3 Lifting Lug Holes W1-W4 (SPCM)
12E/PP111/E3 Lifting Lug Holes W1-W4
12E/PP114/E3 Lifting Lug Holes W1-W4

12E/PP115/E4 Lifting Lug Holes W2/W3 Repair (Exterior)

This QA Inspector randomly observed ABF welder Rick Clayborn performing the back-gouge operation of ultrasonic rejectable indications on “A” deck Lifting Lug Holes W2 and W3 located at W2 y+530mm: (20 mm wide; 60 mm length; and 11 mm in depth), W3 at y+195mm: (20 mm wide; 60 mm length; 15 mm in depth). This QA Inspector observed QC Inspector Fred Von Hoff perform a Magnetic Particle Inspection (MT) of the excavation to determine the soundness of the metal. Upon completion of the testing this QA Inspector noted that Mr. Von Hoff found no rejectable indications.

This QA Inspector randomly observed ABF welder Rick Clayborn (Welder ID 2773) performing the repair welding operation of ultrasonic indications as per the SMAW process in the (1G) flat position on “A” deck Lifting Lug Holes W2 and W3 at 12E/PP115/E4. This QA Inspector observed the use of E7018-H4R electrodes and QC Inspector Fred Von Hoff verify that the preheat temperature was at the minimum of 66 degrees C and that the welding parameters (Amps=138) were in accordance with WPS D1.5–1001- Repair. The welding parameters observed at this location appeared to be in general compliance with approved WPS and the contract specifications.

12E/PP114/E4 Lifting Lug Hole W4 Repair (Exterior)

This QA Inspector at random intervals, observed the excavation operations of an ultrasonic indication by ABF welding personnel on lifting lug hole W4 at 12E/PP114/E4. The dimensions of the excavation were; y+235mm (20mm wide; 70mm length; 11mm deep). QC Inspector Fred Von Hoff was observed performing a MT test on the site to ensure soundness of the metal. It was noted that Mr. Von Hoff found no rejectable indications.

This QA Inspector randomly observed ABF welder Rick Clayborn perform the repair welding operations on lifting lug hole W4 located at 12E/PP114/E4 on the exterior of the OBG. The welder performed the work utilizing the SMAW process in the 1G flat position and employed 3.2mm E7018-H4R electrodes with amperage of 128. The QC Inspector was observed monitoring the welding and the parameters and this QA Inspector noted that the work was completed on this day and the parameters at this location appeared to be in general compliance with the contract specifications.

12E/13E/A3/A4 FCAW-G (Interior)

This QA Inspector randomly observed ABF welding operator James Zhen (ID 6001) performing the Flux Core Arc Welding with gas (FCAW-G) process utilizing a “Bug-O” motorized rail system with a magnetic base

attached in the (4G) overhead position on the underside of deck plate “A3/A4”, at 12E/13E of the OBG. This QA Inspector observed QC Inspector Fred Von Hoff monitoring the welding to ensure the welding parameters were in compliance pertaining to ABF-WPS-D15-3110-4. The parameters were recorded as (A=245/V=23.7/TS=190/HI=1. 83). This QA inspector made subsequent observations throughout the shift to monitor quality and noted that the work was completed on this date and appeared to be in general conformance to the contract requirements. This joint is a Seismic Performance Critical Member (SPCM).

Note: The QAI reviewed the observations and inspection with QA Lead Inspector, Daniel Reyes, written in this report. No issues were noted by the QAI and the QA Lead Inspector concurs with the QA report.

Summary of Conversations:

The were no pertinent conversations to report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910 , who represents the Office of Structural Materials for your project.

Inspected By:	Frey,Doug	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer